Reviewer’s report

Title: No association between the aluminium content of trabecular bone and bone density, mass or size of the proximal femur in elderly men and women

Version: 2 Date: 12 May 2006

Reviewer: Jari P Arokoski

Reviewer’s report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
From my point of view, I think that main problem of the study design is the selection of the subjects as the authors have discussed. It was not possible to control the effects osteoporosis and OA to the bone mineral density and size results. Some cross-sectional studies have shown that patients with hip OA have greater local bone mineral density BMD than healthy controls, in some study hip OA patients have only larger femoral neck size and consequently higher BMC compared to healthy controls. Also because the measurements were made from the opposite site than where the actual aluminium content of trabecular bone may have effects to the results.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The methods should be more closely described. During the operations the bone biopsies were taken from the trabecular bone of the proximal femur. Authors should describe more detailed from which part of the femur samples were taken and the size of the samples. In DXA measurement system both cortical and trabecular part of the femoral neck are used for analysis. Why did you used only trabecular bone not cortical in aluminium content analysis? How did you determine the total hip BMD (g/cm2)? You used spine phantom to evaluate CV of the BMD measurement. What was the CV of femoral neck BMD measurements?

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests